Abstract of the Disclosure:

A batch of semiconductor wafers are exposed after an alignment in a wafer stepper or scanner and each of their alignment parameters are determined. Using, e.g., a linear formula with

5   tool specific coefficients, the overlay accuracy can be calculated from these alignment parameters in advance with a high degree of accuracy as if a measurement with an overlay inspection tool had been performed. The exposure tool-offset can be adjusted on a wafer-to-wafer basis to correct for the

10   derived overlay inaccuracy. Moreover, the alignment parameters for a specific wafer can be used to change the tool-offset for the same wafer prior to exposure. The required inspection tool capacity is advantageously reduced, the wafer rework decreases, and time is saved to perform the exposure step.

15

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